

REMARKS

The Office Action dated June 28, 2005, has been received and reviewed.

Claims 1-44 are currently pending and under consideration in the above-referenced application, each standing rejected.

Reconsideration of the above-referenced application is respectfully requested.

Supplemental Information Disclosure Statement

Please note that a Supplemental Information Disclosure Statement was filed in the above-referenced application on March 18, 2005, but that the undersigned attorney has not yet received any indication that the references cited in the Supplemental Information Disclosure Statement have been considered in the above-referenced application. It is respectfully requested that the references cited in the Supplemental Information Disclosure Statement of March 18, 2005, be considered and made of record in the above-referenced application and that an initialed copy of the Form PTO/SB/08A that accompanied that Supplemental Information Disclosure Statement be returned to the undersigned attorney as evidence of such consideration.

Copies of the PTO date stamped postcard and previously filed Supplemental Information Disclosure Statement are enclosed for the sake of convenience.

Preliminary Amendment

Also, please note that a Preliminary Amendment was filed in the above-referenced application on November 10, 2004, but that the undersigned attorney has not yet received any acknowledgement that the Preliminary Amendment has been entered into the Office file for the above-referenced application. If, for some reason, the Preliminary Amendment has not yet been entered into the Office file, the undersigned attorney would be happy to provide the Office with a true copy thereof.

Rejections Under 35 U.S.C. § 102

Claims 1-44 stand rejected under 35 U.S.C. § 102(e) for reciting subject matter which is purportedly anticipated by that described in U.S. Patent 6,630,995 to Hunter (hereinafter “Hunter”).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Hunter describes apparatus for monitoring the status of substrates during processing thereof; for example, while the substrates are undergoing various semiconductor device fabrication processes. The monitoring systems of Hunter include illumination elements and optically sensitive elements (*e.g.*, cameras, etc.).

Hunter does not describe that the monitoring apparatus disclosed therein may be part of a programmed material consolidation apparatus that includes a selective material consolidation system, which is configured to form an object on at least one of a support element and a substrate positioned on the support element. In contrast, Hunter merely describes that the monitoring apparatus thereof may be used with conventional semiconductor device fabrication equipment (*e.g.*, chemical vapor deposition (CVD) chambers, physical vapor deposition (PVD) chambers, etcher, chemical mechanical planarization (CMP) apparatus, etc.), none of which comprises a selective material consolidation system, and none of which is configured to form an object on at least one of a support element and a substrate positioned upon the support element. Therefore, Hunter does not anticipate each and every element of any of independent claims 1, 21, or 31.

Furthermore, since Hunter lacks any express or inherent description of a programmed material consolidation apparatus that includes a selective material consolidation system, it is not possible for the processor or any other control element that communicates with the optical elements thereof to also communicate with a selective material consolidation system, as is required by each of independent claims 1, 21, and 31.

In addition, with respect to independent claim 1, Hunter lacks any express or inherent description of a machine vision system that has “a field of vision which is at least substantially coextensive with a field of exposure of [a] selective material consolidation system.

Hunter also includes no express or inherent description of a machine vision system with a locationally stationary camera that is “positioned to avoid interference with [a] selective material consolidation system,” as required by independent claim 21.

Therefore, Hunter does not anticipate each and every element independent claim 1, 21, or 31, as would be required to maintain the 35 U.S.C. § 102(e) rejections of these claims.

Claims 2-20 are each allowable, among other reasons, for depending directly or indirectly from claim 1, which is allowable.

Claim 10 is additionally allowable since Hunter neither expressly nor inherently describes a machine vision system with a camera having an image resolution of about 0.00001 inch.

Claim 13 is further allowable because Hunter does not expressly or inherently describe a machine vision system with a scan element including x- and y-axes elements that intersect one another, or that a camera may be positioned at a location where the x- and y-axes elements intersect each other.

Claim 15 is further allowable since Hunter does not expressly or inherently describe a scan element with an actuator that is configured to move an associated x- or y-axis element incrementally.

Claim 16 is also allowable since Hunter lacks any express or inherent description of a scan element with an actuator that is configured to move an associated x- or y-axis element continuously.

Claim 19 is additionally allowable because Hunter includes no express or inherent description of a control element that “is configured to cause [a] selective material consolidation system to effect fabrication of one or more objects at a precise location . . . based on a location of at least one feature viewed by [a] machine vision system.”

Each of claims 22-30 is allowable, among other reasons, for depending directly or indirectly from claim 21, which is allowable.

Claim 22 is further allowable because Hunter lacks any express or inherent description of a machine vision system that has “a field of vision which is at least substantially coextensive with a field of exposure of [a] selective material consolidation system.

Claim 30 is additionally allowable since Hunter includes no express or inherent description of a control element that “is configured to cause [a] selective material consolidation system to effect fabrication of one or more objects at a precise location . . . based on a location of at least one feature viewed by [a] machine vision system.”

Claims 32-44 are each allowable, among other reasons, for depending directly or indirectly from claim 31, which is allowable.

Claim 32 is also allowable since Hunter lacks any express or inherent description of a machine vision system that has “a field of vision which is at least substantially coextensive with a field of exposure of [a] selective material consolidation system.

Claim 33 is additionally allowable because Hunter does not expressly or inherently describe a scan element that positions a camera proximate to a location in which selective material consolidation is to be effected.

Claim 34 is further allowable since Hunter neither expressly nor inherently describes a machine vision system including a camera with an image resolution of about 0.00001 inch.

Claim 38 is also allowable because Hunter does not expressly or inherently describe a control element that “is configured to cause [a] selective material consolidation system to effect fabrication of one or more objects at a precise location . . . based on a location of at least one feature viewed by [a] machine vision system.”

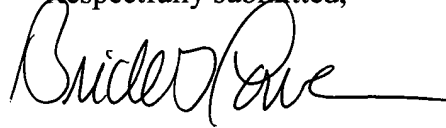
Claim 40 is further allowable since Hunter does not expressly or inherently describe a machine vision system with a scan element including x- and y-axes elements that intersect one another, or that a camera may be positioned at a location where the x- and y-axes elements intersect each other.

Withdrawal of the 35 U.S.C. § 102(e) rejections of claims 1-44 is respectfully solicited.

CONCLUSION

It is respectfully submitted that each of claims 1-44 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



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Enclosure: Copy of PTO date stamped postcard
Copy of Supplemental Information Disclosure Statement filed on 03/18/05
Copy of PTO/SB/08A

Document in ProLaw